QC

Quality Control

Work Order ID 105941 -

Memo

105941

Page 1

Tuesday, August 27, 2013 7:31:08 AM *N900040100* Accept Setup Start D3910-3 Item ID: Revision ID: Item Name: X-TUBE LUG *16* Start Qty: 16.00 Cust Item ID: Start Date: 8/27/2013 Required Date: 9/20/2013 Reg'd Qty: 16.00 Customer: Reference: Run Start Date: 13/08 27Tooling: Process Plan: Date: Approvals: Stop SPC (Y/N): Date: QC: Date: Reject Reject Tool ID Tool # Plan Accept Insp. Set Up/ Sequence ID/ Operation Qty Qty Number Stamp Code Description Run Hours Work Center ID Draw Nbr Revision Nbr D3910 B 0.00 Outsource process - Machining 110 CX13/08/27 (16 HAAS CNC VERTICAL MACHINING #1 *110* 0.00 Outsource5 Memo Issue P/O to Motec Outsource process - Machining Machine as per dwg C of C is required 0.00 Receive & Inspect for Damage & Mat'l Certs 120 *120* 0.00 Packaging Memo Ensure C of C is attach Packaging 0.00 QC6-Inspect dimensions to drawing 130 *130* 0.00

Se Pule NCR13: 3277

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

	SIOWII			The second	SEIGN					QA Closed:	Date:	1514157	
Work Order	· \t	5591	-13	1	DISPOSITION				AGAINST DE	PARTMENT	PARTMENT/PROCESS		
					Rework			Skid-tube	Crosstube		Water Jet	Engineering	
Part No	Part No. <u>D3910-3</u>				Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality	
2 0 1/2	NCR No. 13-3281 Work Ord					- 1		noforming	Finishing	-	re/Packaging	Other	
NCR No	13.	-22	18		Use-as-is Work Order Update			Large Fab	Composite	The state of	Supplier		
1000					las de			о Ц		1			
Root	LLY.			Was paran	ption of work order update		nitial	Acti		Sign &	2000		
Cause	Date	Step	Qty	(or Non-conformance	Chi	ief Eng	Descr	iption	Date	Verification	QC Inspector	
Doc/Data	In laster	190	II A	port	has to be	9	W.	and how	ck to	DAS 27	29	DAS 29	
Equip/Tooling	_13/1a/co	100	14)	100		9-89	9-89	9-89	
Operator				no po	auden coat by			Supplier	ton	13/12/02	13/12/02	13/12/02	
Material				the .	a solve &			11	1 - 4		100		
Setup				IN	Dupped of			10-pass	odes ceal		1	10.0	
Other	1 20 Oct mach						0- 00	ALL DES					
Process								رما دم	7				
Supplier	ier Doudon				uden agot at Delle			1-	Mus				
Training	aining Quec				20.				O				
Unapproved				200									
					AUL	T CATE	GORY				(Jan		
Landing					General					Ovalized]p/r/	
	Bending Bend				1912	\vdash	Grain		-			Pressure/Forced	
	Centre Not Concentric to O/S BOM/Rou				\vdash	Hardwa		-	Over/Under	HARRY MANAGEMENT	Temperature/Cure Weld		
[]				Broken/Damaged	-		ion Incomplete		Part Incorre		Wrong Stock Pulled		
· · · · · · · · · · · · · · · · · · ·	Crushed/Crimped Burrs				-		ions Incomplete/U	Unclear	Part Lost/M	issing	_ wrong Stock Pulled		
Br 1 188	Cuffs Contamination				_	Mainte		-	Part Moved				
\$1 at 100	Heat Treat Countersink			The second contracts		Mislabe			Positioned V		Jostan		
W				Cut Too Short	_	Misrea	d ·		Power Loss/	Surge	Other		
W	Ripples in Bend Drill Holes			-	_	Offset	2012				5.0		
	Torque V			n	Drawing	_	cocase neme	Calibration					
	Turning S	- Just Control			Finish			Sequence				- 10	
				Folio		Outside	Dimensions				A. I		

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

105941

Page 2

Tuesday, August 27, 2013 7:31:08 AM

Item ID:

D3910-3

Accept

N900040100

Setup Start

Revision ID:

Start Date:

Item Name:

Required Date: 9/20/2013

X-TUBE LUG

8/27/2013

Start Oty: 16.00 Req'd Qty: 16.00 *16* *16*

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

QC:

Date: Date: Tooling:

SPC (Y/N):

Date: Date: Run Start

Stop

Sequence ID/ Work Center ID

140

HandFinish

Operation Description

Chemical Conversion Coat per QSI005 4.1

Set Up/ Run Hours

Tool # Plan Tool ID

Accept Code Qty

Reject Qty

Reject Number Stamp

Insp.

140

Hand Finishing

Memo

0.00 0.00

ATG P10. 21082

CZ 13/08/27

150

150 QC

Quality Control

QC3-Inspect Part Finish

Memo

0.00

0.00

(\$ 13/68/2)

160

160 Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

0.00

Memo

START TIME: OVEN TEMPERATURE: FINISH TIME:

m 126125 A.T.G 7/0:21082

CZ 13/08/27

N	CR:	Yes /	No
	C12.	164	140

DQA:	Date:	

NOIL 165 / NO						WORK ORDER NOW			VIAITEL / OI	DAIL	QA Closed:	Date	
Work Orde	r:			中国		DISPOSITION		71		AGAINST DE	PARTMENT,	/PROCESS	
			745		W 30	Rework	1		Skid-tube	Crosstube	1	Water Jet	Engineering
Part N	lo.				TEN F	Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					The second	Use-as-is			noforming	Finishing		re/Packaging	Other
NCR N	lo:					Work Order Update			Large Fab	Composite		Supplier	
The same				H	A. P.	* Version							The second
Root					Desc	ription of work order update	200	nitial	0.700	ction	Sign &		
Cause		Date	Step	Qty	198	or Non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data							-						
Equip/Tooling				7									
Operator											18		-5.3
Material			4.50										
Setup									100				
Other									20,000				ing the same
Process													
Supplier								w.	4	w r			54-5
Training	2		Fields.								91	2.5	
Unapproved					THE PERSON NAMED IN		ALII	T CATE	CORY				16.
Landir	n/2 6	Sear		Sec.		General	AUL	CATE	GORT				760
Carro		Bending			AND AND A	Bend		Grain			Ovalized		Pressure/Forced
		Centre No	ot Concer	ntricto	o/s	BOM/Route	-	Hardwa	ire		Over/Under	tolerance	Temperature/Cure
·		Cracks	9			Broken/Damaged		Control of the Control	ion Incomplete		Part Incorred	and the second second	Weld
2.4		Crushed/0	Crimped			Burrs	_	Annest Co	tions Incomplete,	/Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs				Contamination			enance		Part Moved	_	
	=	Heat Trea	it		Maria Con-	Countersink		Mislab	eled		Positioned V	Vrong	- Tel
		Inspection	n Strip in	Tube		Cut Too Short		Misrea	d		Power Loss/	Surge	Other
		Ripples in	Bend			Drill Holes		Offset					
		Torque W	aves in E	xtrusio	n	Drawing		Out of	Calibration				
9 7	100	Turning S	equence		明星	Finish		Out of	Sequence				ie.
		Wave/Tw	rist in Tub	oe .		Wave/Twist in Tube Folio			Dimensions		10.0		

Tuesday, August 27, 2013 7:31:08 AM *N900040100* Accept Setup Start D3910-3 Item ID: Revision ID: X-TUBE LUG Item Name: *16* Start Qty: 16.00 Cust Item ID: Start Date: 8/27/2013 *16* Required Date: 9/20/2013 Reg'd Qty: 16.00 Customer: Reference: Run Start Tooling: Date: Date: Process Plan: Approvals: Stop Date: QC: Date: SPC (Y/N): Tool # Plan Reject Reject Tool ID Accept Insp. Set Up/ Sequence ID/ Operation Qty Qty Number Stamp Code Description Work Center ID Run Hours QC Inspect Part Finish 170 0 *170* QC Memo Quality Control Identify as per dwg & Stock Location 180 *180* 0.00 Packaging Memo 26 Packaging 9-89 13/12/18 \$ QC21- Final Inspection - Work Order Release 0.00 190 *190* 0.00 QC Memo Quality Control

	VAC - 122-290	
NCR:	Yes	/ No

DQA:	Date:		

Ment.	Cit. Tes 7 No							ui Oitti	VIANCE / OT I		QA Closed:	Date:	
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
100						Rework	1	V	Skid-tube	Crosstube		Water Jet	Engineering
Part N	Vo.					Scrap		1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
歌。這				11/2		Use-as-is		Thern	noforming	Finishing	Rec/Stor	re/Packaging	Other
NCR N	No				This is	Work Order Update			Large Fab	Composite		Supplier	雙型
41	_				15 4 4	Selection of the second							30
Root		1			Desc	ription of work order update	100	nitial	00000	ion	Sign &	- 12 13	
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspector
Doc/Data	\vdash			1 1270									50.50
Equip/Tooling	\blacksquare												
Operator													120
Material	Н				Town Service								#7
Setup	H												166
Other	H		T. Gran	HE.									黄
Process	\vdash												
Supplier Training	H			I E									
Unapproved	H			P. C.	E.,								200
Onapproved	Н				- Princip	dia F	AUL	T CATE	GORY			l	14.5
Landi	niz G	iear	General										
		Bending						Grain			Ovalized		Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks		Broken/Damaged				Inspect	ion Incomplete		Part Incorre	ct	Weld
		Crushed/	Crimped Burrs					Instruct	ions Incomplete/U	Jnclear	Part Lost/Mi	issing	Wrong Stock Pulled
Artes 11		Cuffs Contamination					Mainte	enance		Part Moved			
1		Heat Treat Countersink					Mislabe	eled		Positioned V	Wrong		
Ser sing	Inspection Strip in Tube Cut Too Short					Misread	i		Power Loss/	Surge	Other		
191	Ripples in Bend Drill Holes				Offset								
		Torque W			n	Drawing		resimple (CT) (C	Calibration				N =
		Torning S				Finish			Sequence		-		
		Wave/Tw	ist in Tul	e e		Folio		Outside Dimensions					

Tuesday, August 27, 2013 7:31:07 AM

Work Order ID:

105941

Parent Item:

D3910-3

Parent Item Name:

X-TUBE LUG

Start Date: 8/27/2013

Required Date: 9/20/2013

Start Qty: 16.00

Required Qty: 16.00

Comments:

IPP REV:A NEW ISSUE 09-11-25 JLM VERIFIED BY:DD

IPP REV:B AS PER REV B 10-

03.22	II M	VED	EIEL	DRY	·DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3910-3P		Purchased	No				Each	0.0000		16	PU13	11/4	(14)
Crosstube Lug D2423 Lug Extrusion		Manufactured	No				f	268.9220		2.18947	37 CL13	3/10/2	5
Lug Landston				Location		Loc Qty	<u>Lo</u>	c Code					
				MAT006 8795	13	221.5 221.5			_ 6	2.2			
				Metec		47.422							

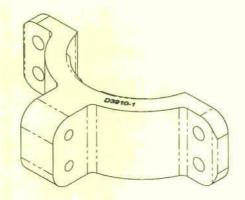
												Dun.	Date.	- 2.5
NCR: Y	es	/ No					WORK ORDER NON-C	ON	NFORM	MANCE / UPDATE				
					(stall spin		No. aliv	_				QA Closed:	Date:	2.5
Vork Orde	r:						DISPOSITION			AGAINST	PROCESS			
Part N	lo:	Use-as-is Work Order Update			Scrap Use-as-is		Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite				Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other		
Root					Desc	rip	tion of work order update	ı	nitial	Action		Sign &		
Cause		Date	Step	Qly		0	r Non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
oc/Data juip/Tooling	7						n lai							
perator	-													
laterial	-	AND THE RESERVE OF THE PERSON NAMED IN COLUMN TO SERVE OF												17.4
etup ther														
rocess														
upplier														横山
raining)= ().				1									
napproved														47
			建			F/	AUL	T CATE	GORY					
Landir	ng G	iear	THE STREET		RE SIE		General							
y .		Bending			40		Bend		Grain			Ovalized		Pressure/Forced
		Centre No	e Not Concentric to O/S BOM/Route			BOM/Route		Hardwa	are		Over/Under	tolerance	Temperature/Cure	
73		Cracks				Broken/Damaged		Inspect	ion Incomplete		Part Incorrect		Weld	
		Crushed/Crimped Burrs				Instruct	tions Incomplete/Unclear		Part Lost/Mis	ssing	Wrong Stock Pulled			
		Cuffs Contamination				Mainte	enance		Part Moved		N ₁₀			
		Heat Treat Countersink			THE POST OF STANDARD AS		Mislabe		L	Positioned W				
		Inspection		Tuhe			Cut Too Short		Misread	d	L	Power Loss/Surge Other		
		Ripples in			34294		Drill Holes	_	Offset					- 1 Salari
	4	Torque W			n	de	Drawing		-	Calibration				
		Turning S	equence				Finish		Out of	Sequence				

Outside Dimensions

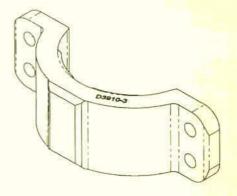
H:/FORMS/Quarity Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

Folio



D3910-1 X-TUBE LUG



D3910-3 X-TUBE LUG

CX13/08/127 W10'. 1059 41

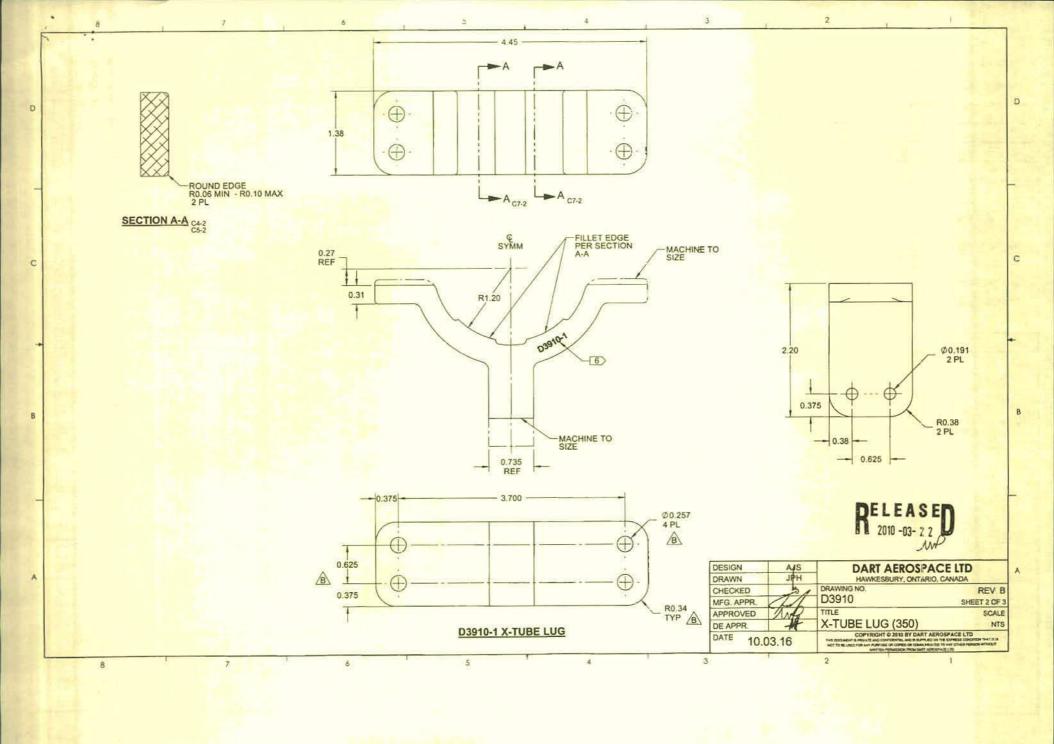
NOTES:
1) MATERIAL: MAKE FROM D2423 EXTRUSION
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: ENGRAVE PART NUMBER TO A DEPTH OF 0.010 ± 0.005 IN THIS LOCATION WITH A TOOL TIP RADIUS
OF 0.015 ± 0.005 7) WEIGHT -1: 0.32 lbs -3 0.25 lbs

8	PILLET V REASON	HOLES: 4 PL V WAS RO 50 (A3 V: SEE TR-D35	WAS 2 PL (A3-2) & (A3-3); R0.34 I-2) & (A3-3). 0-607-2	JPH	10.03.18
A	NEW 155			JPH	10.03.04
REV.			DESCRIPTION	BY	DATE
DESIG	N	AJS	DART AEROS	PACE L'	TD
DRAW	N	JPH	HAWKESBURY, ONT	ARIO, CANAL	DA AC
CHECK	KED	3/1	DRAWING NO.		REV. B
MFG.	APPR.	22/	D3910		SHEET 1 OF 3
APPR(OVED	Not!	TITLE		SCALE
DE AP	PR.	4	X-TUBE LUG (350)		NTS
DATE	10.0	3.16	THIS DOCUMENT IS PRINTED HIS CONFECURITY, AND IS MAN HOT TO BE USED FOR ANY PURPLIES ON COPPED ON COM- HISTORY REPORTED FROM DISK	PRINCIPLE ON THE EXPRESS ALMERS TO ANY OTHER	CONDITION THAT IS

		23 200
NCR:	Yes /	No

DQA:	Date:	

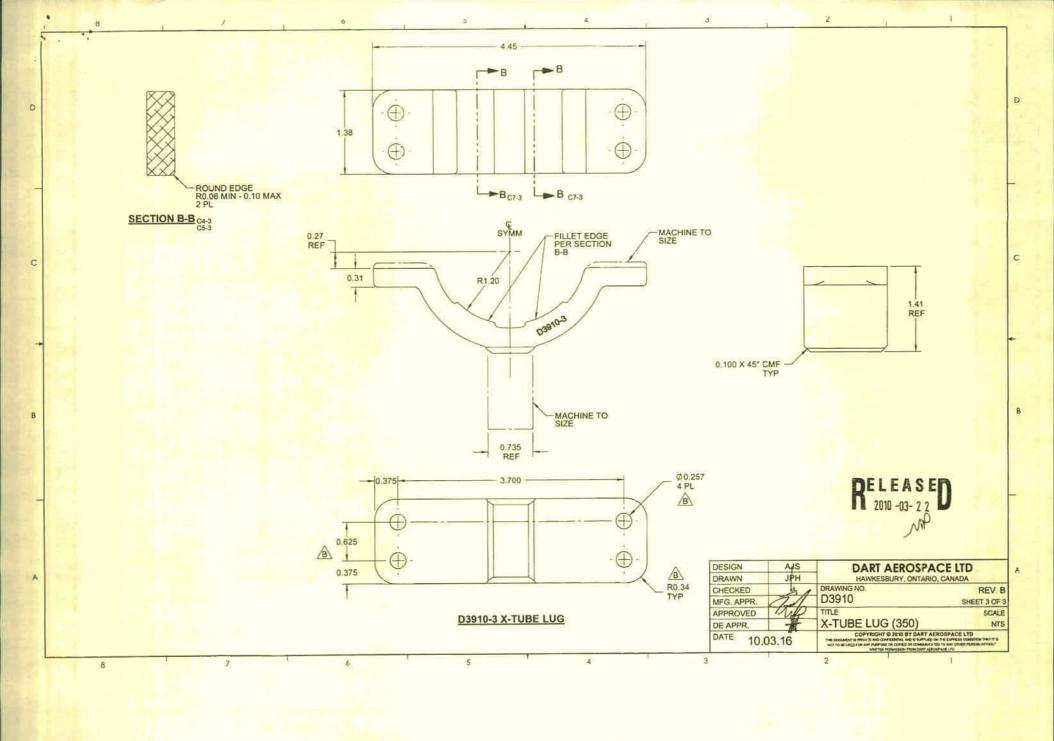
									18		QA Closed:	Date	
Work Orde	Work Order: DISPOSITION					AGAINST DEPARTMENT/PROCESS							
	Rework		1		Skid-tube	Crosstube	ĺ	Water Jet	Engineering				
Part N	a.					Scrap	1 1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
			4-11-			Use-as-is	1 1		noforming	Finishing		re/Packaging	Other
NCR N	o.					Work Order Update	1		Large Fab	Composite	SAME OF SAME	Supplier	Marie I
	87	4					1						
Root			DUD!		Desc	cription of work order update	lı	nitial	Ac	tion	Sign &		1780
Cause		Date	Step	Qty	4 6.6	or Non-conformance	Chi	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data					最生							l l	
Equip/Tooling													
Operator					Apres :								900 70 00
Material	1												
Setup					Alberta .								
Other			N. KEE		Carlo								
Process					1415								
Supplier													
Training									- 1-1				
Unapproved			155		Bar							L	
	1,1	N.		1 11 1			AUL	T CATE	GORY				
Landin	_					General		(a.e			1		٦
		3ending				Bend	\vdash	Grain			Ovalized	Section Section 1	Pressure/Forced
		Centre No	ot Concer	ntric to	O/S	BOM/Route	\vdash	Hardwa			Over/Under		Temperature/Cure
		Cracks				Broken/Damaged	_	Inspection Incomplete			Part Incorre		Weld
		Crushed/	Crimped			Burrs	\vdash	Instructions Incomplete/Unclear		Unclear	Part Lost/M	ssing	Wrong Stock Pulled
# 2113 520		Cuffs				Contamination	-	Mainte			Part Moved	N. a. Control of Control	
		Heat Trea				Countersink	-	Mislabe			Positioned V		John
		nspectio		Tube		Cut Too Short	\vdash	Misrea			Power Loss/	surge	Other
		Ripples in				Drill Holes		Offset					
-		Tarque W			n	Drawing	-	Out of Calibration					
1	Turning Sequence Finish			Out of Sequence			The state of the s						



N	CR		Yes /	/ No
6.7	~	100	COMME /	0.00

DQA:	Date:	

		14	Lin.					*		QA Close	d: Da	te:	52
Work Order:	1=21				DISPOSITION				AGAINST D	EPARTMEN	T/PROCESS		
Part No.		Rework Scrap Use-as-is Work Order Update		Skid-tube Crosstube Small Fab Thermoforming Finishing Composite		b Prod. Eng. Coor. g Rec/Store/Packaging			Engineering Quality Other				
Root				Descri	ption of work order update	1	nitial	Act	tion	Sign &			
Cause	Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verificatio	n	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													
					F	AUL	T CATE	GORY					
Landing	Gear Bending				General Bend		Grain	darr		Ovalized		ПР	ressure/Forced
	Centre N	ot Concer	ntricto	o/s	BOM/Route		Hardware			Over/Und	er tolerance		emperature/Cure
	Cracks				Broken/Damaged		Inspection Incomplete			Part Incor		$\overline{}$	Veld
15 to	Crushed/	Crimped			Burrs		Instructions Incomplete/Unclear		Unclear	Part Lost/		∐v	Vrong Stock Pulled
	Cuffs Contamination		-	Mainte		-	Part Move						
	Heat Trea				Countersink		Mislabe		_	Positione			
_	Inspectio		Tube		Cut Too Short	-	Misrea	4	L	Power Los	ss/Surge		Other
	Ripples in				Drill Holes		Offset						
	Torque V			n	Drawing	-	12.042.000	Calibration					
	Turning S				Finish		-	Sequence					
	Wave/Twist in Tube Folio			Outside	Dimensions								



NCR: Yes /	No
------------	----

DQA:	Date:	
		- 10,500

			Ble							QA Closed:	Date			
Work Order			N.		DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No	Rework Part No. Scrap Use-as-is NCR No. Work Order Update			Skid-tube Crosstube Small Fab Thermoforming Finishing Large Fab Composite			· · · · · · · · · · · · · · · · · · ·	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other					
Root				Descr	iption of work order update	Ir	nitial	Ac	ction	Sign &				
Cause	Date	Step	Qty	0 10	or Non-conformance	Chi	ef Eng	Desc	ription	Date	Verification	QC Inspector		
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved							- A							
			THE	/ 10 图	F	AUL	T CATE	GORY						
Landin	g Gear Bending				General Bend		Grain	41-11-12		Ovalized		Pressure/Forced		
	Centre No	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure		
	Cracks				Broken/Damaged		Inspect	ion Incomplete		Part Incorre	ct	Weld		
黄 鱼 擅	Crushed/	Crimped			Burrs		Instruct	ions Incomplete,	/Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled		
	Cuffs			Miles v	Contamination		Mainte			Part Moved				
	Heat Trea	at			Countersink		Mislabe			Positioned V	200			
Man and	Inspectio	n Strip in	Tube		Cut Too Short		Misrea	1		Power Loss/	Surge	Other		
- 3	Ripples in	n Bend			Drill Holes		Offset							
	Torque V	Vaves in I	Extrusio	n	Drawing		Out of	Calibration		N		33.2		
	Turning S	Sequence	N. N.		Finish		Out of	Sequence			Town and the first			
	Wave/Tu	vist in Tul	be	100	Folio		Outside	Dimensions						

H:/FORMS/Quality Assurance\approved QA/NC≅WO Rev G



A.T.G. INDUSTRIES INC. 731 INDUSTRIELLE STREET ROCKLAND, ON K4K 1T2 Canada

Ph: (613) 446-4544 Fax: (613) 446-4558

Pack List

Number: 906958

Date: 28-Nov-13

To

DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7 Canada

Ship To

CHANTAL LAVOIE DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7 Canada

Ph: 613 632-9577 Fax: 613 632-1053

Ph: 613 632-9577

Terms		Ship Via	Ship Via						
Quantity	Description								
	PLEASE REFERENCE THE PACE SHIPMENT. IF YOU HAVE ANY QUESTIONS,								
248			Rev: G						
ea	MOUNTING LUG Job: 14996	PO: PO21082	Line: 1						
123	Part: D3235-1P		Rev: A						
ea									
	Job: 14997	PO: PO21082	Line: 2						
14	Part: D3910-3P		Rev: B						
ea									
(Job: 14998	PO: PO21082	Line: 3						
	DATE: 28 NOV	2013							
	CERTIFIED SIGNATURE :	1 Agotte							
	RECEIVER SIGNATURE :	**							
	CERTIF	ICATE OF CONFORMANCE							
	A.T.G. INDUSTRIES INC. CERTIFIES THAT ALL ITEMS IN THIS SHIPMENT ARE IN CONFORMANCE WITH THE REQUIREMENTS, SPECIFICATIONS, AND DRAWINGS REFERENCED IN THE ABOVE PURCHASE ORDER. I.S.O. 9001: 2008 REGISTERED / MADE IN CANADA								

